CONVERSION GUIDE

ACCOUNTING AND FINANCIAL INFORMATION SYSTEM

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11000 Wolfe Road
Cupertino, California 95014

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PREFACE

The Hewlett-Packard Accounting and Financial Information System is a computer-based accounting system for small business applications.

This manual describes how to convert a customer's accounting application to the Accounting and Financial Information System. Section I describes how to create and build system input files; Section II describes how to create system master and interim files. Sections III through VI describe how to build the system master files. Section VII describes the uses of system utility programs. Section VIII describes error diagnostics and messages.

This *CONVERSION GUIDE* is one of three manuals that describe the Accounting and Financial Information System. The other two manuals are:

ACCOUNTING AND FINANCIAL INFORMATION SYSTEM INTRODUCTION
This booklet summarizes the features of the system; outlines the functions of files, programs and commands used by the system; and discusses supporting material and facilities available to Hewlett-Packard customers.

ACCOUNTING AND FINANCIAL INFORMATION SYSTEM JOB CONTROL
This reference manual describes how to use all programs in the system. It describes the program commands; how to set up, start and stop each program; and provides program charts and examples.

Readers planning to use the Accounting and Financial Information System should read the *INTRODUCTION* first. Readers also must be familiar with the contents of the *MOVING-HEAD DISC OPERATING SYSTEM* manual (HP 02116-91779) and *SOFTWARE OPERATING PROCEDURES* before attempting to use the Accounting and Financial Information System.

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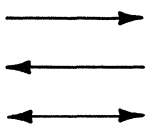
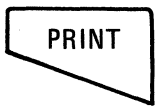
DEFINITIONS OF TERMS

Term	Definition
TYPE	Refers to interaction between the system and the operator at the system teleprinter. The system types messages, requests and error diagnostics; the operator types directives and responses to system messages.
PRINT	Refers to information printed on the system output device by the system, including reports, summaries and job data. The system output device is usually a line printer, but could be another device, depending upon parameters typed by the operator.
CREATE	Refers to the process of naming and reserving disc file areas for system interim and master files. Files are created by the SETP1 and SETP2 programs.
BUILD	Refers to the process of filling created files with data. Files are built by the LEDHN, VENHN, INVIN, EMPHN and CUSHN programs.
DIGIT	Refers to any numeric value. A field of digits is a numeric field, and cannot contain characters.
CHARACTER	Refers to any ASCII character field. A field of characters may contain digits. All character fields must be bounded by the ASCII quote mark character (") which cannot be used within the field.
STANDARD	Refers to a default value. When a parameter or value is omitted, a standard value is inserted by the system in its place.
Ø and 0	Ø is the number zero; 0 is the character 0.

SYMBOLS USED IN THIS MANUAL

Samples	Meaning
	A MASTER, AN INTERIM OR AN INPUT DISC FILE
	If the file is named, the symbol represents that file only. If the term filex is used the symbol represents one of several possible files, which are listed below the chart.
	A SYSTEM PROGRAM: OR A PROGRAM USED BY THE SYSTEM
	THE DIRECTION OF INFORMATION FLOW If from a file to a program, the program takes information from that file. If from a program to a file, the program puts information on that file. If both to and from a file, the program takes information from and puts information on that file.
	ANY PRINTED OUTPUT FROM A PROGRAM Represents any printed matter generated by the program, either automatically or from the entry of program commands.

INTRODUCTION

The Hewlett-Packard Accounting and Financial Information System is a computer-based accounting system for small business applications. A set of computer programs, files and commands processes accounting information through a Hewlett-Packard computer system to produce complete accounting records and a wide variety of timely financial reports.

To use the system, a customer must convert his current accounting records into a set of system computer files. Once these files have been created, they form a data base of accounting records and information that can be processed by system programs.

The conversion process consists of these steps:

- Determining which phases of the current accounting application are to be converted to the system, and gathering the appropriate information.
- Installing system programs in a Moving-Head Disc Operating System.
- Creating and building the files to be used in the application.

Hewlett-Packard field representatives and marketing personnel assist the customer when he is determining how to use and install the system. This manual describes how the user can create and build the system files required for any application.

CREATING AND BUILDING SYSTEM FILES

After the customer has determined the phases of his current accounting system to convert and has installed the system programs, he must build a data base of accounting information by converting his current accounting records into system files. Follow these procedures:

- Create input files containing year-to-date accounting records and system program commands that process these records. See Section I.
- Create and build a master parameter file (MASTE). See Section II.
- Create a master record file for each subsystem to be used in the application. See Section II.

  For Financial Statements subsystem records, create file MASLE; and optionally, departmentalized ledgers.

  For Accounts Receivable and Inventory subsystem records, create files MASIN and MASCU.

  For Payroll subsystem records, create file MASEM.

  For Accounts Payable subsystem records, create file MASCR.
- Create interim record files to be used by the subsystems. See Section II.

  For customer transactions, create file CUSTR.

  For ledger transactions, create file TEMPL.

  For the checkbook account, create file CHECK.

  For inventory transactions, create file TEMIN.
  For unpaid invoices, create file PAYFL.

  For profit and loss records, create file PLFIL.

  For back-order invoices, create file BAKIN.
- Build a master record file for each subsystem to be used in the application. See Sections III through VI.

PROGRAMS USED DURING CONVERSION

The following programs are used in the conversion process. Most of these programs also are used during day-to-day system operations and have additional functions associated with these operations. Therefore, the programs are described in the *JOB CONTROL* manual as well as in this *CONVERSION GUIDE*.

Program	Function
SETP1	Creates and builds the master parameter file (MASTE) by processing an input file containing accounting parameters unique to the system application.
SETP2	Creates master and interim files on designated disc packs; creates a directory file for each master file; and creates a department directory file if any department ledgers are specified.
CUSHN	Builds a master customer file (MASCU) by processing an input file containing year-to-date customer records and CUSHN program commands.
INVIN	Builds a master inventory file (MASIN) by processing an input file containing year-to-date inventory records and INVIN program commands.
EMPHN	Builds a master employee file (MASEM) by processing an input file containing year-to-date employee records and EMPHN program commands.
VENHN	Builds a master creditor file (MASCR) by processing an input file containing year-to-date creditor and vendor records and VENHN program commands.

Program	Function
LEDHN	Builds a master ledger file (MASLE) and departmentalized master ledger files (if they are specified), by processing an input file containing year-to-date ledger account records and LEDHN program commands.
CONVR	Prints selected records or record items from a master or interim file by processing parameters entered through the system teleprinter.
UTIL	Makes copies of master and interim files and checks file sizes of master and interim files by processing parameters entered through the system teleprinter.

USING THE :PROG DIRECTIVE

The DOS-M program directive (:PROG) is used to start every program in the Accounting and Financial Information System. The :PROG directive has the following format:

:PROG, name [,output][,input][,display]

name = The name of the Program (must be specified). Commas are used to separate any subsequent parameters.

output = The logical unit number of the list output device used by the program (usually the line printer). If this parameter is omitted, the system assigns logical unit 6 as the output device. If this parameter is omitted but subsequent parameters are used, the comma must be entered.

input = The logical unit number of the input device used by the program, (usually the system disc). If this parameter is omitted, the system assigns logical unit 2 as the input device. If this parameter is omitted, but a subsequent parameter is used, the comma must be entered.

display = A special display before delete function used by the following system programs: EMPHN, LEDHN, VENHN, CUSHN and INVIN.

When this parameter is omitted or equal to zero, any item to be deleted through a "DELETE" command is printed followed by a message typed on the system teleprinter to which the operator must respond before the item can be deleted.

When this parameter is entered as not equal to zero, the display is not used, and any "DELETE" request in that program is processed automatically.

Examples

```
:PROG, LEDHN,7,1,1          :PROG, LEDHN,,1,Ø
:PROG, LEDHN                :PROG, LEDHN,7,,1
:PROG, LEDHN,,1             :PROG, LEDHN,,,1
```

STORING FILES ON DISC PACKS

Disc packs can be used to store master, interim and departmentalized ledger files (if departmentalized ledgers are used). The sizes of the various files determine the number of disc packs used to store the system. Smaller applications can store their files on one disc pack; larger applications may require several disc packs to store all their required files.

If more than one pack is required, these rules must be followed:

1. The TEMPL and CHECK interim files, and the MASTE master file are used by every subsystem (Accounts Payable, Accounts Receivable and Inventory, Financial Statements and Payroll), and must be mounted and active at all times.

2. Departmentalized ledgers need not be all on the same disc pack or on the same disc pack as the MASLE file, but the MASLE file must be on a disc pack that is mounted and active at the same time as any departmentalized ledger file that is being used.

MULTI-DRIVE DISC SYSTEMS

To avoid the possibility of having duplicate file names when a system includes more than one disc drive (more than two disc subchannels), check the status and contents of discs on all unused subchannels before executing system programs. If any duplicate files exist on the unused subchannels and must be saved, copy permanent cartridges to removable packs and remove the packs from the system before destroying the contents. The contents of these unused subchannels then can be destroyed by using the DOS-M :IN directive.

SECTION I
CREATING AND BUILDING INPUT FILES

Before a system program can be used to create the accounting data base, the following prerequisites must be met:

a. The master and interim files used by the program must be created.

b. The system input file used by the program must be created, built and stored on an input device.

NOTE: Input to most programs can be made directly from the system teleprinter.

Section II contains procedures for creating system master and interim files. Procedures used to create, build and store system input files on an input device are described below.

CONTENTS OF INPUT FILES

During the conversion process, input files contain year-to-date totals and other accounting information derived from the customer's current accounting records and formatted to system specifications for processing by the programs. Processing the input files builds the data base of accounting information.

The input files used during the conversion process are listed in the following table. The program instructions in this manual describe the formatting specifications for the input files(s) required by each program. Note that the names used for input files are sample names.

File Name	File Contents	Processing Program
INPUT	Current inventory records for MASIN file	INVIN
DATAB	Accounting parameters for MASTE file	SETP1
DATAB	Master and interim file specifications	SETP2
DATAB	Current employee records for MASEM file	EMPHN
DATAB	Current customer records for MASCU file	CUSHN
DATAB	Current creditor records for MASCR file	VENHN
DATAB	Current ledger records for MASLE file	LEDHN

INPUT FILE NAMES

Unlike master and interim files, which have names defined by the system, input files can have any name the customer desires, as long as these names are five characters or less in length. For example, this manual designates six input files, each containing different information and processed by a different system program, as files with the name DATAB. The contents of interim files may be purged by system programs, but the input files must be purged by the user after the files have been processed.

PROCESSING INPUT FILES

Input files are read through an input device into the computer. One of several input devices can be used to hold (or store) an input file.

A disc stores an input file if that file has been created and loaded onto the disc by another program.

A teleprinter enters an input file directly to the computer if the contents of the file are typed one statement at a time.

A magnetic tape unit contains an input file if that file has been created and loaded onto the magnetic tape by another program.

A photoreader contains an input file if that file has been created and punched onto paper tape by another program.

A card reader holds an input file if that file has been punched on cards and stacked in the card reader.

The recommended method of preparing an input file for processing is to store the input file on a disc (from cards, paper tape, photoreader, etc), then verify the accuracy of the disc input file. This method allows the customer to thoroughly check and correct errors in his input file before it is processed by systems programs. Unless otherwise noted, program procedures described in this manual assume that any input file has been created and built on a disc.

CREATING, BUILDING AND PURGING AN INPUT FILE

Step	Procedure	Examples
1	NAME THE INPUT FILE File names must be five characters or less.	DATAB INPUT
2	SET USER DISC EQUAL TO THE SYSTEM DISC Using the :UD directive, set the system disc to receive data in its user file area.	:UD,SYSTEM,Ø
3	STORE SOURCE DATA IN NAMED FILE Using the :STORE directive, specify which input device contains the source data file, and name the file.	:STORE,S,DATAB,5 :STORE,S,INPUT,1
4	INPUT FILE IS READ ONTO SYSTEM DISC When the input device named in Step 3 is a paper tape reader or a magnetic tape unit, the following message is typed when the end of source data is reached: DONE? Type YES if there is no more source data for the input file; type NO if there is more data to load. When YES is typed, the number of lines in the file is typed: *nnnn* LINES	YES NO

Step	Procedure	Examples
4 (cont)	When the input device named in Step 3 is a unit record device (card reader or system teleprinter), the last statement in the source data must be a double colon (::) to indicate the end of the file. When this statement is recognized, the following message is typed: *nnnn* LINES	1,21300 ⋮ 125,"95014" "END" ::
5	PRINT INPUT FILE FOR ERROR CHECK. Using the :LIST directive, have the system print the named input file just set up. The file can then be checked for any errors.	:LIST,S,6,DATAB
6	CORRECT ANY INPUT FILE ERRORS. Using the :EDIT directive, correct any errors found in the input file.	:EDIT,DATAB,1 (followed by EDIT operations)
7	IDENTIFY THE INPUT FILE TO THE SYSTEM PROGRAM. When the file is ready to be processed, use the :JFILE directive to identify the disc input file to the program used to process the file. (This step is the first in program operating procedures.)	:JFILE,DATAB
8	EXECUTE THE PROGRAM.	:PROG,LEDHN

Step	Procedure	Examples
9	PURGE USED INPUT FILE FROM SYSTEM AREA ON DISC. After an input file has been processed by the program, it should be purged from the disc to make room for other files and processing. Using the :PURGE directive, remove the input file from the disc.	:PURGE,DATAB

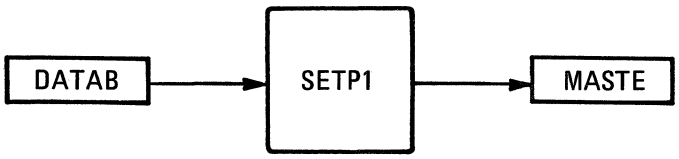
If a disc processing error or an input file error occurs, an error diagnostic message is printed on the system teleprinter. See Section VIII for system error diagnostic messages.

SECTION II
CREATING MASTER AND INTERIM FILES

This section describes the procedures to create and build a MASTE file using the SETP1 program and the procedures to create the other master files and required interim files using the SETP2 program.

SETP1

The SETP1 program creates and builds the master parameter file (MASTE) by processing an input file of accounting parameters unique to the application.



PREREQUISITES

A MASTE file parameter list must be constructed first. If the entire system is created at one time, the parameter list contains the MASTE File Parameter entries shown below. If the subsystems are created separately, the parameter list required by the SETP1 program for each subsystem can be found in the following tables:

MASTE File Parameters for Accounts Receivable and Inventory (Section III).
MASTE File Parameters for Accounts Payable (Section V).
MASTE File Parameters for Payroll (Section IV).
MASTE File Parameters for Financial Statements (Section VI).

To create an input file containing the required MASTE file parameters, refer to Section I for input file building instructions.

SETP1 OPERATING PROCEDURES

Step	Procedure	Examples
1	IDENTIFY THE INPUT FILE Using a :JFILE directive, identify the input file containing the data.	:JFILE,DATAB
2	START THE SETP1 PROGRAM Using a :PROG directive, start SETP1.	:PROG,SETP1
3	SETP1 PROGRAM BEGINS FILE PROCESSING The following request is typed: 'NEW OR UPDATE?'	
	Type "NEW" if the SETP1 program has not processed the input file disc pack, or	"NEW"
	type "UPDATE" if the disc pack has been previously processed by the SETP1 program.	"UPDATE"
4	INPUT PACK NUMBER If the response in step 3 was "NEW" the SETP1 program types the following request: 'INPUT PACK NUMBER'	
	Then type the disc pack number (1 to 999 only).	333
5	INPUT FILE IS PROCESSED SETP1 completes processing of the input file, and creates a MASTE file. The following message is typed: SETP1: STOP ØØØØ	

SETP1 ERROR DIAGNOSTICS

The following error diagnostics could occur during SETP1 processing. They are typed on the system teleprinter. See Section VIII for a discussion of system error diagnostic messages.

INVALID

ERROR IN NEXT LINE: INVALID PARAMETER CODE

MASTE FILE PARAMETERS

The SETP1 program processes the parameter lists shown in the following table. For those MASTE file parameters required by each subsystem, see these sections:

MASTE FILE PARAMETERS FOR ACCOUNTS RECEIVABLE AND INVENTORY (Section III).
MASTE FILE PARAMETERS FOR ACCOUNTS PAYABLE (Section V).
MASTE FILE PARAMETERS FOR PAYROLL (Section IV).
MASTE FILE PARAMETERS FOR FINANCIAL STATEMENTS (Section VI).

Enter the parameters applicable to your system into an input file for SETP1 processing.

RULES FOR USING MASTE FILE PARAMETERS

Remember the following rules when constructing MASTE file parameters.

1. Parameters can be entered in any sequence.
2. If a parameter does not apply, omit it.
3. A comma must separate each parameter number and that parameter's entry.
4. All non-numeric entries must be bounded by quote marks.
5. For dollar amounts entered, dollar signs are optional. However, include decimal points to get cent values.
6. Although the maximum ledger account number size is eight digits, only the six most significant digits are printed on any report.

MASTE FILE PARAMETERS

Number	Meaning	Sample Entry
1	BEGINNING CHECK NUMBER Must be all numeric, not more than six digits	1,213ØØØ
2	LAST CHECK REGISTER PAGE PRINTED	2,72
4	NUMBER OF LINES PER PAGE FOR LISTING CHECK TRANSACTIONS Standard is 60 lines per page	4,56
5	CURRENT CHECKING BALANCE As of conversion date	5,125696.32
7	PAR VALUE OF COMMON STOCK	7,1.ØØ
8	NUMBER OF COMMON STOCK SHARES OUTSTANDING	8,12732Ø
9	NUMBER OF COMMON STOCK SHARES AUTHORIZED	9,25ØØØØ
21	LEDGER ACCOUNT NUMBER FOR ACCOUNTS RECEIVABLE Maximum is eight digits	21,11Ø
22	LEDGER ACCOUNT NUMBER FOR SALES TAX DUE Maximum is eight digits	22,224
23	LEDGER ACCOUNT NUMBER FOR INCOME, SALES Maximum is eight digits	23,43Ø
24	LEDGER ACCOUNT NUMBER FOR CASH Maximum is eight digits	24,1Ø1
25	LEDGER ACCOUNT NUMBER FOR COST OF SALES, INVENTORY Maximum is eight digits	25,513
26	LEDGER ACCOUNT NUMBER FOR INVENTORY Maximum is eight digits	26,12Ø
27	LAST LEDGER ACCOUNT NUMBER USED FOR ASSETS Maximum is eight digits	27,152
28	LAST LEDGER ACCOUNT NUMBER USED FOR LIABILITIES Maximum is eight digits	28,39Ø

MASTE FILE PARAMETERS (cont.)

Number	Meaning	Sample Entry
29	LAST LEDGER ACCOUNT NUMBER USED FOR INCOME Maximum is eight digits	29,43Ø
3Ø	LAST LEDGER ACCOUNT NUMBER FOR DIRECT COST Maximum is eight digits	3Ø,513
31	LAST LEDGER ACCOUNT NUMBER FOR ACCOUNTS PAYABLE Maximum is eight digits	31,2Ø5
32	LEDGER ACCOUNT NUMBER FOR PROMPT PAYMENT DISCOUNT Maximum is eight digits	32,99Ø
41	LAST STATEMENT NUMBER ISSUED Maximum is six digits	41,16245Ø
44	NUMBER OF LINES ON STATEMENT FORM Must be at least 21, plus the sum of the entries in parameters 45 and 46. The standard is 27 lines	44,33
45	NUMBER OF LINES FROM TOP OF STATEMENT FORM TO FIRST LINE OF STATEMENT FORM ADDRESS Standard is 3 lines	45,5
46	NUMBER OF LINES FROM BOTTOM OF STATEMENT TEST TO BOTTOM OF STATEMENT FORM The standard is 3 lines	46,5
61	NUMBER OF LAST INVOICE PREPARED A maximum of six digits	61,1236
62	NUMBER OF LINES (FROM TOP TO BOTTOM) ON ADDRESS LABELS USED FOR SHIPPING AND MAILING. Must be at least 7; standard is 9 lines	62,7
63	NUMBER OF LINES FROM TOP OF ADDRESS LABEL TO FIRST LINE OF LABEL ADDRESS Standard is 3 lines	63,2
64	NUMBER OF LINES ON INVOICE FORM Must be at least 21, plus the sum of the entries in parameters 65 and 66. The standard is 27 lines	64,33

MASTE FILE PARAMETERS (cont.)

Number	Meaning	Sample Entry
65	NUMBER OF LINES FROM TOP OF INVOICE FORM TO FIRST INVOICE HEADER LINE The standard is 3 lines	65,5
66	NUMBER OF LINES FROM BOTTOM OF INVOICE TEXT TO BOTTOM OF INVOICE FORM The standard is 3 lines	66,5
67	CUSTOMER CODE FOR CASH INVOICING TRANSACTIONS A one-to-six character customer code.	67,"1ØØ1"
68	STATE SALES TAX, IN PERCENT	68,5.5%
69	CITY SALES TAX, IN PERCENT	69,1.2%
81	NUMBER OF LINES PER PAGE FOR GENERAL LEDGER LISTING The standard is 6Ø lines per page.	81,62
83	LEDGER ACCOUNT NUMBER FOR START OF PROFIT AND LOSS All ledger accounts equal to or greater than this number are used in the profit and loss program (PANDD). Maximum of eight digits	83,439
84	LAST LEDGER ACCOUNT NUMBER FOR CURRENT ASSETS Maximum of eight digits	84,12Ø
85	LAST LEDGER ACCOUNT NUMBER FOR FIXED ASSETS Maximum of eight digits	85,152
86	LAST LEDGER ACCOUNT NUMBER FOR CURRENT LIABILITIES Maximum of eight digits	86,224
87	LAST LEDGER ACCOUNT NUMBER FOR FIXED LIABILITIES Maximum of eight digits	87,399
88	LAST LEDGER ACCOUNT NUMBER FOR EXPENSES Maximum of eight digits	88,99Ø
89	LAST LEDGER ACCOUNT NUMBER FOR STOCK-HOLDERS' EQUITY (RETAINED EARNINGS) Maximum of eight digits	89,39Ø

MASTE FILE PARAMETERS (cont.)

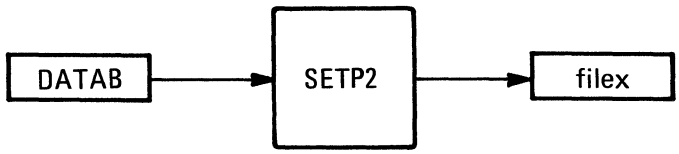
Number	Meaning	Sample Entry
1Ø1	YTD SALARY LEVEL AT WHICH UNEMPLOYMENT DEDUCTIONS FOR EMPLOYEES CEASES	1Ø1,7ØØØ.ØØ
1Ø2	PERCENT OF GROSS INCOME TO BE WITHHELD FOR UNEMPLOYMENT The standard is 3.Ø%.	1Ø2,3.6%
1Ø3	NORMAL NUMBER OF HOURS WORKED EACH PAY PERIOD FOR HOURLY EMPLOYEES The standard is 4Ø hours.	1Ø3,44
1Ø4	PERCENT OF GROSS INCOME TO BE WITHHELD FOR FICA (SET BY LAW)	1Ø4,5.2%
1Ø5	FICA CUTOFF POINT FOR YEAR (SET BY LAW)	1Ø5,4Ø5.6Ø
1Ø6	PAY PERIOD CODE FOR HOURLY EMPLOYEES The standard is Code 1.	1Ø6,2
1Ø7	PAY PERIOD CODE FOR SALARIED EMPLOYEES The standard is Code 3.	1Ø7,4
	NOTE: The codes for parameters 1Ø6 and 1Ø7 are: *1 = paid weekly* *2 = paid biweekly* *3 = paid semi-monthly* *4 = paid monthly*	
1Ø8	LEDGER ACCOUNT NUMBER FOR FICA WITHHOLDING Maximum of eight digits	1Ø8,21Ø
1Ø9	LEDGER ACCOUNT NUMBER FOR GROSS WAGES Maximum of eight digits	1Ø9,6ØØ
11Ø	LEDGER ACCOUNT NUMBER FOR FEDERAL WITHHOLDING TAX Maximum of eight digits	11Ø, 211

MASTE FILE PARAMETERS (cont.)

Number	Meaning	Sample Entry
111	LEDGER ACCOUNT NUMBER FOR STATE WITHHOLDING TAX Maximum of eight digits	111,212
112	LEDGER ACCOUNT NUMBER FOR LOCAL WITHHOLDING TAX Maximum of eight digits	112,215
113	LEDGER ACCOUNT NUMBER FOR UNEMPLOYMENT WITHHOLDING TAX Maximum of eight digits	113,213
114	LEDGER ACCOUNT NUMBER FOR MISCELLANEOUS DEDUCTIONS Maximum of eight digits	114,216
121	COMPANY NAME, BOUNDED BY QUOTES Maximum of 24 characters	121,"BEAVER TRUST"
122	COMPANY MAILING ADDRESS, BOUNDED BY QUOTES Maximum of 18 characters	122,"2Ø FRONT STREET"
123	COMPANY CITY ADDRESS, BOUNDED BY QUOTES Maximum of 12 characters	123,"PETULAMA"
124	COMPANY STATE ADDRESS, BOUNDED BY QUOTES Maximum of six characters	124,"CALIF."
125	COMPANY ADDRESS ZIP CODE, BOUNDED BY QUOTES Must be five characters.	125,"926Ø4"

SETP2

The SETP2 program creates master and interim files on designated disc packs; creates a directory file for each master file; and creates a department directory file if any department ledgers are specified.



filex can be:

MASLE, MASCR, MASIN, MASCU, MASEM,
DIRLE, DIRCR, DIRIN, DIRCU, DIREM,
TEMPL, CHECK, CUSTR, PAYFL, PLFIL,
TEMIN, BAKIN, MAS01, ... , MAS99,
DIR00, DIR01, ... , DIR99

PREREQUISITES

Determine which master and interim files are to be created. For a list of master and interim files required by each subsystem see Table 2-1.

Determine the file size required for each master and interim file. Table 2-2.

Determine the department codes of department ledgers if they are to be included in the application. Department codes are assigned by parameter 4 of the LEDHN program's "ADD" command. See LEDHN program instructions.

Determine which disc packs are to store each master, interim and departmentalized ledger file. See Table 2-2.

The following table lists each subsystem and the master and interim files that must be created for each subsystem's use. These files, except for MASTE, are created by the SETP2 program. MASTE is created by the SETP1 program.

Table 2-1
Relationship of Subsystems and Files

To Use This Subsystem	Create These Master Files	And These Interim Files
ACCOUNTS RECEIVABLE AND INVENTORY	MASIN MASCU	CUSTR TEMIN BAKIN
PAYROLL	MASEM	
ACCOUNTS PAYABLE	MASCR	PAYFL
FINANCIAL STATEMENTS	MASLE MASØ1-MASnn (If Dept Ledgers used)	PLFIL
ALL SUBSYSTEMS	MASTE	CHECK TEMPL

The number of records in a file depends on that file's activity. The length of a record in a file depends on that file's function. Table 2-2 is a guide for determining the size of system master and interim files. The size of these files must be estimated to establish the number of records entry (Step 3) in the SETP2 program instructions. Once the number of records entry has been determined for each file, check the records/track to see if more than one disc pack will be required to hold the files for the application.

Table 2-2

Size of Master and Interim Files

File Name	Records/Track	File Name	Records/Track
MASCR	64	CHECK	146
MASCU	37	CUSTR	17Ø
MASEM	31	PAYFL	1Ø2
MASIN	73	PLFIL	341
MASLE	17Ø	TEMIN	256
MASnn		TEMPL	128
(dept. ledgers)	17Ø	BAKIN	48

NOTE: A disc pack contains 2Ø3 tracks, 199 of which can be used by the customer. Each track consists of 24 sectors; each sector contains 128 sixteen-bit words. See the DOS-M manual for a complete description of disc pack usage.

For every 42 records of a master file (left column above), one additional sector is reserved to accommodate the master file directory (DIR*xx*) created by the SETP2 program for that file. For example, SETP2 would reserve six sectors for a directory to a master file of 252 records; seven sectors for a directory to a master file of 253 records. A directory file record equals one sector.

The directory files created by SETP2 are:

Master File	Directory File
MASCR	DIRCR
MASCU	DIRCU
MASIN	DIRIN
MASEM	DIREM
MASLE	DIRLE
MASØ1...MAS99	DIRØ1,..,DIR99;DIRØØ

SETP2 OPERATING PROCEDURES

All SETP2 instructions are entered through the system teleprinter.

Step	Procedure	Examples
1	START THE SETP2 PROGRAM Using the :PROG directive, start SETP2	:PROG,SETP2
2	ENTER NAME OF FILE BEING CREATED. SETP2 types the following request: 'ENTER NAME OF FILE BEING SET UP(IN QUOTES)' Type the name of the file.	"MASCU"
3	ENTER SIZE OF FILE, IN RECORDS. SETP2 types the request: 'NUMBER OF RECORDS?' Type the number representing the size of the file, in records, as determined from Table 2-2.	246
4	NAME DISC PACK USED TO STORE FILE. SETP2 types the following request: 'PACK NUMBER?' Type the disc pack number of the disc pack mounted. (1 to 999)	21

SETP2 OPERATING PROCEDURES (cont.)

Step	Procedure	Examples
5	SETP2 CREATES NAMED FILE AND ITS DIRECTORY. SETP2 creates the named file, and file directory if required. For interim files, it types: 'FILE *xxxxx* CREATED' For master files (and their directory files) it types: 'FILE MAS*xx* CREATED' 'FILE DIR*xx* CREATED' then returns to Step 2 for the next file entry.	
6	STOP SETP2 PROCESSING To stop SETP2, type: "END" to the SETP2 request: 'ENTER NAME OF FILE BEING SET UP (IN QUOTES)' The following message is typed: SETP2: STOP ØØØØ	"END"
7	PROCEDURES FOR MASLE AND DEPARTMENTALIZED FILES. When "MASLE" is entered at Step 2, the following sequence is to be followed.	
8	STEP 3 IS TAKEN.	22Ø
9	STEP 4 IS TAKEN	22

Step	Procedure	Examples
1Ø	RESPONSE IF DEPARTMENTALIZED LEDGERS USED. SETP2 types the request: 'WILL LEDGER BE BY DEPARTMENT (YES OR NO)?'	
	Type "YES" if departmentalized ledgers are to be included; "NO" if they are not included. If the response is "NO", Step 5 is taken. If the response is "YES," Step 11 is taken.	"YES" "NO"
11	ENTER NUMBER OF DEPARTMENTS. If Step 11 response was "YES," SETP2 types: 'NO. OF DEPARTMENTS'	
	Type the number of departmentalized ledgers to be created. SETP2 then types: 'FILE MASLE CREATED' 'FILE DIRLE CREATED' 'FILE DIRØØ CREATED'	16
12	ENTER THE "DEPLE" CODE WORD In response to the SETP2 request: 'ENTER NAME OF FILE BEING SET UP (IN QUOTES)'	
	Type "DEPLE" to inform SETP2 that a departmentalized ledger code name follows.	"DEPLE"
13	STEP 3 IS TAKEN. Type the number of records for the file to be created in Step 15.	12Ø
14	STEP 4 IS TAKEN Type the pack number of Step 15 file.	333

Step	Procedure	Examples
15	ENTER THE DEPARTMENTALIZED LEDGER CODE SETP2 types the following request: 'INPUT DEPT. CODE' Type the department code number (which must be identical to the code in parameter 4 of the LEDHN "ADD" command for this department).	"ABCDEF"
16	DEPARTMENTALIZED LEDGER ENTRY CREATED. SETP2 creates the department ledger and types: 'FILE MAS*nn* CREATED' 'FILE DIR*nn* CREATED' and returns to Step 2 for the next file (or department ledger).	

SETP2 ERROR DIAGNOSTICS

The following error diagnostics could occur during SETP2 processing. They are typed on the system teleprinter. See Section VIII for a discussion of system error diagnostic messages.

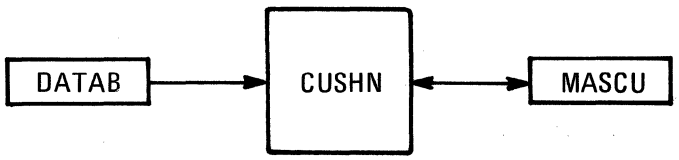
INVALID FILE NAME
FILE ALREADY EXISTS
INVALID
INSUFFICIENT DISC SPACE
DUPLICATE DEPT. NO.
DIRØØ FULL, NO ACTION

SECTION III
BUILDING THE MASCU AND MASIN FILES

This section describes the procedures used to build the MASCU and MASIN files, the master files required for the Accounts Receivable and Inventory subsystem.

CUSHN

The CUSHN program builds a master customer file (MASCU) by processing an input file containing year-to-date customer records and CUSHN program commands.



PREREQUISITES

A MASCU file must be created before CUSHN is used. See the SETP2 program instructions.

An input file (DATAB) of CUSHN program commands and employee records must be created and set up for processing unless commands and data are to be entered directly from the system teleprinter. See "CUSHN Program Commands" and Section I instructions.

CUSHN PROGRAM COMMANDS

Command	Function	Example
"ADD"	ADDS A CUSTOMER RECORD TO MASCU Enter the command, the customer code and the parameter list. Parameters are used to identify items within each customer record. If a parameter is not entered, its field in the MASCU customer record is set to blanks (for characters) or to zero (for numbers). See Table 3-1, CUSHN "ADD" Parameter Codes.	"ADD", "12345" (followed by parameter list)
"CHANGE"	REPLACES A MASCU CUSTOMER RECORD ITEM Enter the command, the customer code and the new values of items to be changed. Use the parameter codes and field sizes specified in Table 3-1.	"CHANGE", "12345" (followed by parameter list)
"DISPLY"	PRINTS A CUSTOMER RECORD FROM MASCU Enter the command, followed by the customer code.	"DISPLY", "12345"
"DELETE"	REMOVES A CUSTOMER RECORD FROM MASCU Enter the command, followed by the customer code. CUSHN types the customer record then the request: 'TYPE "YES" TO DELETE CUSTOMER CODE *nnnnn*'	"DELETE", "12345"
	Type "YES" to delete the record from MASCU or "NO" (or any other entry) to cancel the request.	"YES" "NO"

CUSHN PROGRAM COMMANDS (cont.)

Command	Function	Example
"END"	ENDS THE INPUT FILE COMMANDS AND DATA When "END" is recognized, CUSHN terminates. The following message is then typed: CUSHN : STOP ØØØØ	"END"

Table 3-1

CUSHN "ADD" Parameter Codes

Code	Meaning	Example
1	CUSTOMER CODE A maximum of six characters	1,"123456"
2	FIRST NAME (OR INITIALS) A maximum of six characters	2,"ALFRED"
3	LAST NAME A maximum of 12 characters	3,"FRANKEN"
4	COMPANY NAME A maximum of 18 characters	4,"ALPHA,INC."
5	DEPARTMENT NAME A maximum of 18 characters	5,"Z-21"
6	STREET ADDRESS A maximum of 18 characters	6,"FRONT ST."
7	CITY A maximum of 12 characters	7,"BUFFALO"
8	STATE A maximum of six characters	8,"PA."
9	ZIP CODE A five character field	9,"3Ø3Ø1"
1Ø	CLASS KEY (FOR MAILING LISTS) A maximum of three digits	1Ø, 245

Table 3-1 (cont.) CUSHN "ADD" Parameter Codes

Code	Meaning	Example
11	CREDIT RATING A maximum of two characters	11,"A-"
12	DATE OF LAST STATEMENT Date must be in the form: *mm,dd,yy*	12,Ø1,Ø1,71
15	DATE OF LAST PAYMENT Date must be in the form: *mm,dd,yy*	15,Ø1,15,7Ø
18	CURRENT AMOUNT DUE A maximum of nine digits*	18,1234.4Ø
19	AMOUNT OF LAST STATEMENT A maximum of nine digits*	19,2111.6Ø
2Ø	AMOUNT OF LAST PAYMENT A maximum of nine digits*	2Ø,1233.5Ø
21	TOTAL BUSINESS TO DATE A maximum of nine digits*	21,3346.ØØ
22	AMOUNT OVERDUE FOR 60 DAYS A maximum of nine digits*	22,215.6Ø
23	AMOUNT OVERDUE FOR 90 DAYS A maximum of nine digits*	23,115.4Ø
24	AMOUNT OVERDUE FOR 120 DAYS OR MORE A maximum of nine digits*	24,25.9Ø

*Nine digits = 9999999.99 (the decimal point must be present to get cent values; a dollar sign ($) is optional.

CUSHN OPERATING PROCEDURES

Step	Procedure	Example
1	LINK INPUT FILE TO CUSHN PROGRAM. Using the :JFILE directive, identify the input file that contains the commands and data	:JFILE,DATAB
2	START CUSHN. Using the :PROG directive, start the program.	:PROG,CUSHN
3	CUSHN PROCESSES THE INPUT FILE (DATAB). When CUSHN completes processing, it terminates. The following message is typed: CUSHN : STOP ØØØØ	

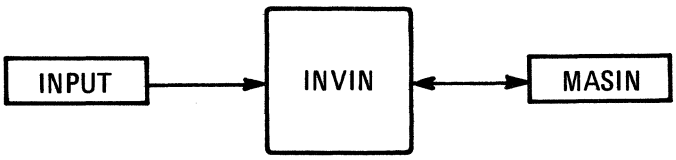
CUSHN ERROR DIAGNOSTICS

The following error diagnostics could occur during CUSHN processing. They are typed on the system teleprinter. See Section VIII for a discussion of system error diagnostic messages:

INVALID COMMAND
CUSTOMER CODE IS NOT ON FILE
CUSTOMER CODE IS ALREADY ON FILE
CUSTOMER CODE IS MISSING
INVALID PARAMETER CODE
INVALID PARAMETER
MASCU FILE IS FULL - CUSTOMER *nnnnnn* WAS NOT ENTERED
NO END COMMAND
INVALID DATE

INVIN

The INVIN program builds a master inventory file (MASIN) by processing an input file containing year-to-date inventory records and INVIN program commands.



PREREQUISITES

A MASIN file must be created first. See the SETP2 program instructions.

An input file (INPUT) of INVIN program commands and year-to-date inventory data must have been created and set up for processing unless commands and data are to be entered directly from the system teleprinter. See the "INVIN Program Commands" and Section I instructions.

INVIN PROGRAM COMMANDS

Command	Function	Example
"ADD"	ADDS AN INVENTORY ITEM RECORD TO MASIN Enter the command, the inventory model number and the parameter list. Parameters are used to enter each item in a MASIN inventory record. If any parameter is not entered, its field in the MASIN inventory record is set to blanks (for character) or to zero (for numbers). See Table 3-2, INVIN "ADD" Parameter Codes for the parameters used.	"ADD", "123456" (followed by parameter list)
"CHANGE"	REPLACES A MASIN INVENTORY RECORD ITEM Enter the command, the inventory model number and the values of the items to be changed. Use the parameter codes and field sizes specified in Table 3-2.	"CHANGE","12345" (followed by parameter list)
"DISPLY"	PRINTS AN INVENTORY RECORD FROM MASIN Enter the command, followed by the model number.	"DISPLY","12345"
"DELETE"	REMOVES AN INVENTORY ITEM FROM MASIN Enter the command, followed by the model number. INVIN types the inventory record, then the request: 'TYPE "YES" TO DELETE MODEL NO. *nnnnn*' Type "YES" to remove the inventory record from MASIN or "NO" (or any other entry) to cancel the deletion.	"DELETE","12345" "YES" "NO"

INVIN PROGRAM COMMANDS (cont.)

Command	Function	Example
"END"	ENDS THE INPUT FILE COMMANDS AND DATA When "END" is recognized, INVIN completes processing of the input file. The following message is then typed: INVIN : STOP ØØØØ	"END"
"ALL"	PRINTS EVERY INVENTORY RECORD IN MASIN When this command is entered, the entire MASIN file is printed, followed by the same summary as for the "VALUE" command.	"ALL"
"VALUE"	PRINTS THE TOTAL VALUE OF INVENTORY ON HAND When the command is entered, the cost of inventory, retail value and profit potential are summarized.	"VALUE"
"ORDER"	PRINTS INVENTORY ITEMS BELOW REORDER LEVEL When this command is entered, each inventory item below reorder level is printed.	"ORDER"
"PRICES"	PRINTS PRICE INFORMATION FOR INVENTORY When this command is entered, the prices for all inventory items are printed. To get prices for individual items, enter the command, followed by the model number.	"PRICES" "PRICES","12345"
"UPDATE" "RESTOK"	These two commands are not used during the conversion process. They are used to process the TEMIN and BAKIN interim files when the System is executing. See the *JOB CONTROL* manual's description of INVIN for an explanation of these commands.	

Table 3-2

INVIN "ADD" Parameter Codes

Code	Meaning	Example
1	MODEL NUMBER FOR MASIN INVENTORY ITEM A maximum of six characters.	1,"A-25"
2	PRODUCT DESCRIPTION A maximum of 18 characters	2,"TAPES"
3	QUANTITY ON HAND A maximum of five digits	3,1Ø22Ø
4	REORDER LEVEL A maximum of five digits	4,1Ø22
5	DATE OF LAST ACTIVITY Date must be in the form: *mm,dd,yy*	5,Ø1,Ø1,71
8	UNIT COST A maximum of seven digits*	8,1Ø2.5Ø
9	UNIT PRICE A maximum of seven digits*	9,125.ØØ
1Ø	SUPPLIER REFERENCE NUMBER A maximum of four digits	1Ø,2612
11	PRICE FOR FIRST PRICE BREAK A maximum of seven digits*	11,7.25
12	QUANTITY AT WHICH FIRST PRICE BREAK OCCURS A maximum of four digits*	12,3ØØ
13	PRICE FOR SECOND PRICE BREAK A maximum of seven digits*	13,5.75
14	QUANTITY AT WHICH SECOND PRICE BREAK OCCURS A maximum of four digits*	14,5ØØ

*Seven digits = 99999.99; four digits = 9999. The decimal point must be included to get cent values. A dollar sign ($) is optional.

INVIN OPERATING PROCEDURES

Step	Procedure	Example
1	LINK THE INPUT FILE TO THE INVIN PROGRAM Using a :JFILE directive, identify the input file that contains the inventory records and INVIN commands.	:JFILE,INPUT
2	START INVIN Using the :PROG directive start the program.	:PROG,INVIN
3	INVIN PROCESSES THE INPUT FILE (INPUT) When INVIN completes processing, it terminates. The following message is typed: INVIN : STOP ØØØØ	

INVIN ERROR DIAGNOSTICS

The following error diagnostics could occur during INVIN processing. They are typed on the system teleprinter. See Section VIII for a discussion of system error diagnostic messages.

INVALID COMMAND
MODEL IS ALREADY IN THE INVENTORY
MODEL IS NOT IN THE INVENTORY
MASIN FILE IS FULL - MODEL *nnnnnn* WAS NOT ENTERED
INVALID PARAMETER CODE
INVALID PARAMETER
MODEL NUMBER IS MISSING
INVALID DATE
NO END COMMAND

MASTE FILE PARAMETERS
FOR ACCOUNTS RECEIVABLE AND INVENTORY

The following MASTE file parameters must be added to the MASTE file if the Accounts Receivable and Inventory subsystem is to be used in an application. Use the SETP1 program instructions (in Section II) to add these parameters to the MASTE file. Note that if any of these parameters already exist on the MASTE file they do not have to be added onto the file again.

MASTE FILE PARAMETERS

Number	Meaning	Sample Entry
21	LEDGER ACCOUNT NUMBER FOR ACCOUNTS RECEIVABLE Maximum is eight digits	21,11Ø
22	LEDGER ACCOUNT NUMBER FOR SALES TAX DUE Maximum is eight digits	22,224
23	LEDGER ACCOUNT NUMBER FOR INCOME, SALES Maximum is eight digits	23,43Ø
24	LEDGER ACCOUNT NUMBER FOR CASH Maximum is eight digits	24,1Ø1
25	LEDGER ACCOUNT NUMBER FOR COST OF SALES, INVENTORY Maximum is eight digits	25,513
26	LEDGER ACCOUNT NUMBER FOR INVENTORY Maximum is eight digits	26,12Ø
41	LAST STATEMENT NUMBER ISSUED Maximum is six digits	41,16245Ø
44	NUMBER OF LINES ON STATEMENT FORM Must be at least 21, plus the sum of the entries in parameters 45 and 46. The standard is 27 lines.	44,33

MASTE FILE PARAMETERS (cont.)

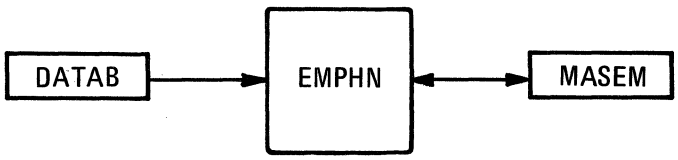
Number	Meaning	Sample Entry
45	NUMBER OF LINES FROM TOP OF STATEMENT FORM TO FIRST LINE OF STATEMENT FORM ADDRESS Standard is 3 lines	45,5
46	NUMBER OF LINES FROM BOTTOM OF STATEMENT TEST TO BOTTOM OF STATEMENT FORM The standard is 3 lines	46,5
61	NUMBER OF LAST INVOICE PREPARED A maximum of six digits	61,1236
62	NUMBER OF LINES (FROM TOP TO BOTTOM) ON ADDRESS LABELS USED FOR SHIPPING AND MAILING. Must be at least 7; standard is 9 lines	62,7
63	NUMBER OF LINES FROM TOP OF ADDRESS LABEL TO FIRST LINE OF LABEL ADDRESS Standard is 3 lines	63,2
64	NUMBER OF LINES ON INVOICE FORM Must be at least 21, plus the sum of the entries in parameters 65 and 66. The standard is 27 lines	64,33
65	NUMBER OF LINES FROM TOP OF INVOICE FORM TO FIRST INVOICE HEADER LINE The standard is 3 lines	65,5
66	NUMBER OF LINES FROM BOTTOM OF INVOICE TEST TO BOTTOM OF INVOICE FORM The standard is 3 lines	66,5
67	CUSTOMER CODE FOR CASH INVOICING TRANSACTIONS. A one-to-six character customer code.	67,"1ØØ1"
68	STATE SALES TAX, IN PERCENT	68,5.5%

SECTION IV
BUILDING THE MASEM FILE

This section describes the procedures used to build the MASEM file, the master file required for the Payroll subsystem.

EMPHN

The EMPHN program builds a master employee file (MASEM) by processing an input file containing year-to-date employee records and EMPHN program commands.



PREREQUISITES

A MASEM file must be created before using EMPHN. See the SETP2 program instructions.

An input file (DATAB) of EMPHN commands and employee records must be created and set up for processing unless commands and data are to be entered directly from the system teleprinter. See "EMPHN Program Commands" and Section I instructions.

EMPHN PROGRAM COMMANDS

Command	Function	Examples
"ADD"	ADDS AN EMPLOYEE RECORD TO MASEM Parameters are used to enter items in the employee's record. If any parameter is not entered, its field in the MASEM employee record is set to blanks (if characters), or to zero (if numbers). See Table 4-1, EMPHN "ADD" Parameter Codes for parameters used.	"ADD", 123456 (followed by parameter list)
"DISPLY"	PRINTS AN EMPLOYEE RECORD FROM MASEM Enter the command, followed by the employee's number.	"DISPLY", 123456
"CHANGE"	REPLACES A MASEM RECORD ITEM Enter the command, the employee number and the values of the items to be changed. Use the parameter codes and field sizes specified in Table 4-1.	"CHANGE", 123456 (followed by parameter list)
"DELETE"	DELETES AN EMPLOYEE RECORD FROM MASEM The employee's record is typed, followed by the EMPHN request: 'TYPE "YES" IF OK TO DELETE THIS EMPLOYEE' Type "YES" to delete the employee record from MASEM, or "NO" (or any other entry) to cancel the request.	"DELETE", 123456 "YES" "NO"
"START"	PLACES AN INACTIVE EMPLOYEE IN AN ACTIVE STATUS Enter the command, followed by the employee's number.	"START", 123456

EMPHN PROGRAM COMMANDS (cont.)

Command	Function	Examples
"STOP"	PLACES AN ACTIVE EMPLOYEE IN AN INACTIVE STATUS Enter the command, followed by the employee's number.	"STOP", 123456
"END"	ENDS THE INPUT FILE COMMANDS AND DATA When "END" is recognized, EMPHN closes the MASEM and DIREM files and terminates. The following message is typed: EMPHN : STOP ØØØØ	"END"

Table 4-1

EMPHN "ADD" Parameter Codes

Code	Meaning	Example
1	EMPLOYEE NUMBER A maximum of six digits. (Not necessary unless employee number is being changed by a "CHANGE" command.)	1,123456
2	HOURLY OR SALARIED EMPLOYEE Enter H for hourly; S for salaried.	2,"H" 2,"S"
3	ACTIVE OR INACTIVE EMPLOYEE Enter * for active, a blank for inactive.	3,"*" 3," "
4	DEDUCTION CODE FOR EXEMPTIONS Enter a number from 1-99, as determined from this table: Number is — Basis of Deduction 5Ø + *n* — Married; with *n* dependents 7Ø + *n* — Single: with *n* dependents Ø to 49 — Straight % of gross earnings	4,53 4,73 4,35
6	EMPLOYEE NAME A maximum of 18 characters	6,"A.C. SMITH"
7	PAY RATE Enter pay period gross for salaried employee. Enter hourly rate for hourly employee (can be in mills).	7,8ØØ.ØØ 7,8.Ø25
8	SOCIAL SECURITY NUMBER The digits must be entered as *nnn,nn,nnnn*.	8,Ø24,45,1234 8,123,31,4567

Table 4-1 (cont.) EMPHN "ADD" Parameter Codes

Code	Meaning	Example
11	EMPLOYEE OVERTIME RATE Enter overtime rate (per hour).	11,13.Ø5
12	FIRST PREMIUM RATE Enter first premium rate (per hour).	12,2.25
13	SECOND PREMIUM RATE Enter second premium rate (per hour).	13,3.25
14	YTD TOTAL FOR FICA TAX Enter total FICA tax withheld to date.	14,246.23
15	YTD GROSS EARNINGS Enter employee's total earnings to date.	15,8612.48
16	YTD TOTAL FOR FEDERAL TAX Enter employee's total withholding to date.	16,932.5Ø
17	YTD TOTAL FOR STATE TAX Enter total state tax withheld to date.	17,128.25
18	YTD TOTAL FOR LOCAL TAX Enter total local tax withheld to date.	18,76.1Ø
19	YTD UNEMPLOYMENT INSURANCE Enter total unemployment insurance withheld to date.	19,32.5Ø
2Ø	FEDERAL TAX THROUGH END OF LAST QUARTER Enter total withholding through end of last quarter.	2Ø,641.5Ø

Table 4-1 (cont.) EMPHN "ADD" Parameter Codes

Code	Meaning	Example
21	GROSS EARNINGS THROUGH END OF LAST QUARTER Enter total earnings through end of last quarter.	21.6121.9Ø
22	MISCELLANEOUS DEDUCTION "A" Enter amount to be deducted each pay period for miscellaneous deduction "A."	22,21.ØØ
23	MISCELLANEOUS DEDUCTION "B" Enter amount to be deducted each time this deduction is required.	23,6.ØØ
24	MISCELLANEOUS DEDUCTION "C" Enter amount to be deducted each time this deduction is required.	24,5.5Ø
25	MISCELLANEOUS DEDUCTION "D" Enter amount to be deducted each time this deduction is required.	25,4.75
26	MISCELLANEOUS DEDUCTION "E" Enter amount to be deducted each time this deduction is required.	26,2.12
27	MISCELLANEOUS DEDUCTION "F" Enter amount to be deducted each time this deduction is required.	27,2.13
28	YTD TOTAL FOR MISCELLANEOUS DEDUCTION "A"	28,221.ØØ
29	YTD TOTAL FOR MISCELLANEOUS DEDUCTION "B"	29,6Ø.ØØ

Table 4-1 (cont.) EMPHN "ADD" Parameter Codes

Code	Meaning	Example
3Ø	YTD TOTAL FOR MISCELLANEOUS DEDUCTION "C"	3Ø,55.ØØ
31	YTD TOTAL FOR MISCELLANEOUS DEDUCTION "D"	31,47.5Ø
32	YTD TOTAL FOR MISCELLANEOUS DEDUCTION "E"	32,21.2Ø
33	YTD TOTAL FOR MISCELLANEOUS DEDUCTION "F"	33,21.3Ø
34	DATE LAST PAID Enter the month, day and year in this format: *mm,dd,yy*	34,11,3Ø,7Ø
37	YTD TOTAL, NON-TAXABLE PAY Enter the total non-taxable pay received this year.	37,211.5Ø
38	EMPLOYEE'S DEPARTMENT CODE A maximum of six characters	38,"ABC123"

EMPHN OPERATING PROCEDURES

Step	Procedure	Example
1	LINK THE INPUT FILE TO THE EMPHN PROGRAM Using a :JFILE directive, identify the input file containing the records and commands.	:JFILE,DATAB
2	START EMPHN Using the :PROG directive, start EMPHN.	:PROG,EMPHN
3	EMPHN PROCESSES THE INPUT FILE AND UPDATES MASEM When EMPHN has finished, the following message is typed: EMPHN : STOP ØØØØ	

EMPHN ERROR DIAGNOSTICS

The following error diagnostics could occur during EMPHN processing. They are typed on the system teleprinter. See Section VIII for a discussion of system error diagnostic messages.

INVALID COMMAND
EMPLOYEE NO. *xxxxxx* NOT ON DISC
INVALID
EMPLOYEE NO. *xxxxxx* NOT ADDED, DISC FILE FULL
ERROR IN NEXT LINE: INVALID PARAMETER CODE
ERROR IN NEXT LINE: DUPLICATE EMPLOYEE NUMBER
ERROR IN NEXT LINE: CONFLICTING EMPLOYEE NO.
ERROR IN NEXT LINE: INVALID PARAMETER VALUE

MASTE FILE PARAMETERS FOR PAYROLL

The following MASTE file parameters must be added to the MASTE file if the Payroll subsystem is to be used in an application. Use the SETP1 program instructions (in Section II) to add these parameters to the MASTE file. Note that if any of these parameters already exist on the MASTE file (through some other subsystem) they do not have to be added onto the file again.

MASTE FILE PARAMETERS

Number	Meaning	Sample Entry
1	BEGINNING CHECK NUMBER Must be all numeric, not more than six digits	1,213ØØØ
24	LEDGER ACCOUNT NUMBER FOR CASH Maximum is eight digits.	24,1Ø1
1Ø1	YTD SALARY LEVEL AT WHICH UNEMPLOYMENT DEDUCTIONS FOR EMPLOYEES CEASES	1Ø1,7ØØØ.ØØ
1Ø2	PERCENT OF GROSS INCOME TO BE WITHHELD FOR UNEMPLOYMENT The standard is 3.Ø%	1Ø2,3.6%
1Ø3	NORMAL NUMBER OF HOURS WORKED EACH PAY PERIOD FOR HOURLY EMPLOYEES The standard is 40 hours	1Ø3,44
1Ø4	PERCENT OF GROSS INCOME TO BE WITHHELD FOR FICA (SET BY LAW)	1Ø4,5.2%
1Ø5	FICA CUTOFF POINT FOR YEAR (SET BY LAW)	1Ø5,4Ø5.6Ø

MASTE FILE PARAMETERS (cont.)

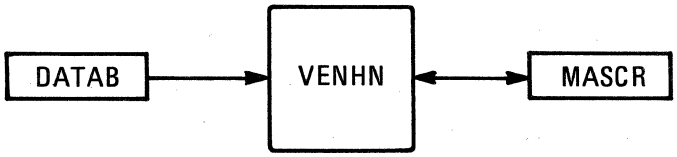
Number	Meaning	Sample Entry
1Ø6	PAY PERIOD CODE FOR HOURLY EMPLOYEES The standard is Code 1.	1Ø6,2
1Ø7	PAY PERIOD CODE FOR SALARIED EMPLOYEES The standard is Code 3. *NOTE: The codes for parameters 1Ø6 and 1Ø7 are:* *1 = paid weekly* *2 = paid biweekly* *3 = paid semi-monthly* *4 = paid monthly*	1Ø7,4
1Ø8	LEDGER ACCOUNT NUMBER FOR FICA WITHHOLDING Maximum of eight digits	1Ø8,21Ø
1Ø9	LEDGER ACCOUNT NUMBER FOR GROSS WAGES Maximum of eight digits	1Ø9,6ØØ
11Ø	LEDGER ACCOUNT NUMBER FOR FEDERAL WITHHOLDING TAX Maximum of eight digits	11Ø,211
111	LEDGER ACCOUNT NUMBER FOR STATE WITHHOLDING TAX Maximum of eight digits	111,212
112	LEDGER ACCOUNT NUMBER FOR LOCAL WITHHOLDING TAX Maximum of eight digits	112,215
113	LEDGER ACCOUNT NUMBER FOR UNEMPLOYMENT WITHHOLDING TAX Maximum of eight digits	113,213
114	LEDGER ACCOUNT NUMBER FOR MISCELLANEOUS DEDUCTIONS Maximum of eight digits	114,216

SECTION V
BUILDING THE MASCR FILE

This section describes the procedures used to build the MASCR file, the master file required for the Accounts Payable subsystem.

VENHN

The VENHN program builds a master creditor file (MASCR) by processing an input file containing year-to-date creditor and vendor records and VENHN commands.



PREREQUISITES

A MASCR file must be created before VENHN can be used. See the SETP2 program instructions.

An input file of VENHN commands and creditor data should be created and set up for processing unless data and commands are to be entered directly from the system teleprinter. See "VENHN Program Commands" and Section I instructions.

VENHN PROGRAM COMMANDS

Command	Function	Example
"ADD"	ADDS A CREDITOR RECORD TO MASCR Every creditor (vendor) record must be entered using this command. Parameters are used to identify items in each creditor record. If a parameter is not entered, its field is set to zero (if numeric) or to blanks (if characters).	"ADD","Ø12345" (followed by parameter list)
"CHANGE"	REPLACES A CREDITOR RECORD ITEM Any item in a creditor record can be replaced using this command. Enter the command, the creditor number, the parameters and new values of items to be changed. Use the parameter codes and field sizes specified in Table 5-1, VENHN "ADD" Parameter Codes.	"CHANGE","Ø12345" (followed by parameter list)
"DISPLY"	PRINTS A CREDITOR RECORD FROM MASCR Enter the command, followed by the creditor number.	"DISPLY","Ø12345"
"DELETE"	DELETES A CREDITOR RECORD FROM MASCR Enter the command followed by the creditor number. The creditor record is typed, followed by the request:	"DELETE","Ø12345"
	'TYPE "YES" TO DELETE VENDOR NO. *nnnnnn*'	"YES"
	Type "YES" to delete the creditor record, from the MASCR file, or type any other entry to cancel the request.	"NO"

VENHN PROGRAM COMMANDS (cont.)

Command	Function	Example
"END"	ENDS THE INPUT FILE COMMANDS AND DATA When "END" is recognized, VENHN has completed processing of the input file and closes the MASCR and DIRCR files. The following message is typed: VENHN : STOP ØØØØ	"END"

Table 5-1

VENHN "ADD" Parameter Codes

Code	Meaning	Example
1	CREDITOR (VENDOR) CODE A maximum of six characters.	1,"123456"
2	COMPANY NAME A maximum of 18 characters.	2,"BEAVER TRUST"
3	DEPARTMENT NUMBER A maximum of 12 characters.	3,"Z-24"
4	STREET ADDRESS A maximum of 18 characters.	4,"FRONT STREET"
5	CITY A maximum of 12 characters.	5,"BEAVER FALLS"
6	STATE A maximum of six characters.	6,"PENNA"
7	ZIP CODE A maximum of five characters	7,"Ø1234"
8	TOTAL BUSINESS TO DATE A maximum of nine digits (9999999.99). The decimal point must be entered to get cent values. A dollar sign ($) is optional.	8,1621Ø.6Ø
9	BALANCE DUE ON ACCOUNT A maximum of nine digits (9999999.99). The decimal point must be entered to get cent values. A dollar sign ($) is optional.	9,821Ø.ØØ

VENHN OPERATING PROCEDURES

Step	Procedure	Example
1	LINK THE INPUT FILE TO THE VENHN PROGRAM. Using a :JFILE directive, identify the input file containing the records and commands.	:JFILE,DATAB
2	START VENHN. Using the :PROG directive, start VENHN.	:PROG,VENHN
3	VENHN PROCESSES THE INPUT FILE. VENHN processes the input file, updating MASCR. The following message is typed: VENHN : STOP ØØØØ	

VENHN ERROR DIAGNOSTICS

The following error diagnostics could occur during VENHN processing. They are typed on the system teleprinter. Section VIII contains a discussion of system error diagnostic messages.

VENDOR ALREADY IN FILE
VENDOR NOT IN FILE
INVALID COMMAND
INVALID PARAMETER CODE
INVALID PARAMETER
TOO MANY PARAMETERS

MASTE FILE PARAMETERS FOR ACCOUNTS PAYABLE

The following MASTE file parameters must be added to the MASTE file if the Accounts Payable subsystem is to be used in an application. Use the SETP1 program instructions (in Section II) to add these parameters to the MASTE file. Note that if any of these parameters already exist on the MASTE file (through some other subsystem) they should not be added onto the file again.

MASTE FILE PARAMETERS

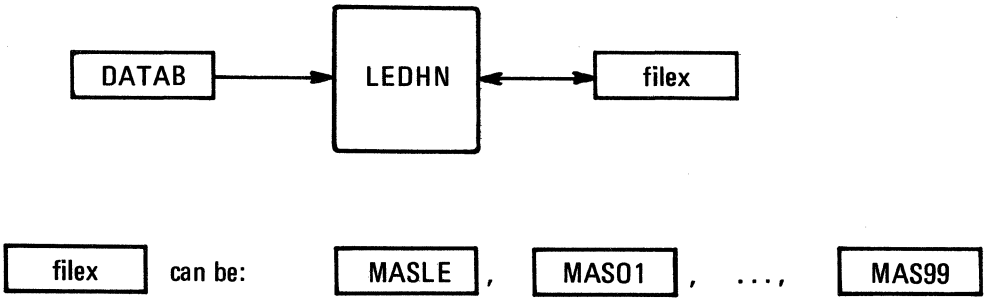
Number	Meaning	Sample Entry
1	BEGINNING CHECK NUMBER Must be all numeric, not more than six digits	1,213ØØØ
24	LEDGER ACCOUNT NUMBER FOR CASH Maximum is eight digits	24,1Ø1
31	LAST LEDGER ACCOUNT NUMBER FOR ACCOUNTS PAYABLE Maximum is eight digits	31,2Ø5
32	LEDGER ACCOUNT NUMBER FOR PROMPT PAYMENT DISCOUNT Maximum is eight digits	32,99Ø

SECTION VI
BUILDING THE MASLE FILE

This section describes the procedures used to build the MASLE file, the master file required for the Financial Statements subsystem. It also describes how to build departmentalized master ledger files if these files are required by an application.

LEDHN

The LEDHN program builds a master ledger file (MASLE) and departmentalized master ledgers, if they are required, by processing an input file containing year-to-date ledger account records and LEDHN program commands.



PREREQUISITES

A chart of ledger accounts must be set up for use by the application. See Appendix A.

A MASLE file must be created by the SETP2 program. If departmentalized ledgers are to be maintained by the system, each department ledger master file must be created with the SETP2 program. See the SETP2 program instructions.

An input file of LEDHN commands and general ledger account information must be created and set up for processing unless data and commands are to be entered directly from the system teleprinter. See the LEDHN commands below and Section I for instructions.

LEDHN PROGRAM COMMANDS

Command	Function	Example
"FILE"	NAMES THE MASTER FILE TO BE UPDATED Only one FILE command is used during a LEDHN run. FILE should be the first command in the input file, but can be omitted if the MASLE file is to be updated. (MASLE is the standard.)	"FILE","MASLE" "FILE","TEMPL" "FILE","AØØ1"
"ADD"	ADDS A LEDGER ACCOUNT TO THE MASTER FILE NAMED Every ledger account must be entered using this command. Parameters are used to enter account data. (See Table 6-1 LEDHN "ADD" Parameter Codes.) If parameters are not entered, their fields are set to blanks (if characters) or to zeros (if numbers). Note that the MASLE file must contain all account numbers contained in any departmentalized ledger used.	"ADD",1ØØ1 2,15ØØ.ØØ 3,"PETTY CASH" 4,"21ØØ" "ADD",1ØØ5
"DISPLY"	PRINTS AN ACCOUNT RECORD FROM MASTER FILE The FILE command indicates the file; DISPLY indicates the account number.	"DISPLY",1ØØ1
"CHANGE"	REPLACES AN ACCOUNT ITEM WITH NEW DATA Enter the account number and item(s) to be changed, with their new values. Do not exceed field size shown in LEDHN "ADD" Parameter Codes, Table 6-1.	"CHANGE",1ØØ1 2,25ØØ.ØØ 4,"ABC123" "CHANGE",1ØØ1 1,1ØØ5

Command	Function	Example
"DELETE"	DELETES AN ACCOUNT FROM THE NAMED MASTER FILE The account record is typed, followed by this request: 'TYPE "YES" TO DELETE LEDGER NO. *nn*' To delete the record, type "YES". To override the deletion, type any other entry.	"DELETE",1Ø05 "YES" "NO"
"END"	ENDS THE INPUT FILE COMMANDS AND DATA When END is recognized, LEDHN completes processing of the input file and constructs the named master file. The following message is typed: LEDHN : STOP ØØØØ	"END"

Table 6-1

LEDHN "ADD" Parameter Codes

Code	Meaning	Examples
1	THE LEDGER ACCOUNT NUMBER A maximum of eight digits	"ADD",1ØØ1
2	THE YTD TOTALS FOR THE ACCOUNT NUMBER A maximum of eleven digits	2,15ØØ.ØØ 2,15ØØØØØØ.ØØ
3	THE ACCOUNT DESCRIPTION A maximum of 24 characters; must be bounded by quote marks.	3,"PETTY CASH" 3,"A2116 PROGRAMMING"
4	THE DEPARTMENT CODE NUMBER A maximum of six characters; must be bounded by quote marks. (Used for the TEMPL file only.)	4,"ABCDEF" 4,"21ØØ"
5	TEMPORARY LEDGER REFERENCE NUMBER A maximum of six characters; must be bounded by quote marks. (Used by the TEMPL file only.)	5,"123456" 5,"ABC123"

NOTE: The maximum number of MASLE account numbers is 19ØØ for a 16K DOS-M system.

The maximum number of account numbers for each department ledger file is also 19ØØ.

LEDHN OPERATING PROCEDURES

Step	Procedure	Examples
1	LINK THE INPUT FILE TO THE LEDHN PROGRAM Using a :JFILE directive, identify the input file to be processed by LEDHN.	:JFILE,DATAB
2	START THE LEDHN PROGRAM Using a :PROG directive, start LEDHN	:PROG,LEDHN
3	LEDHN PROCESSES THE INPUT FILE Processing proceeds according to the commands and data contained in the input file. When LEDHN terminates, the following message is typed: LEDHN : STOP ØØØØ	

NOTE: It is recommended that a copy of the master ledger file to be updated be made before running LEDHN, to provide a backup copy of the file.

LEDHN ERROR DIAGNOSTICS

The following error diagnostics could occur during LEDHN processing. They are typed on the system teleprinter. See Section VIII for a discussion of system error diagnostic messages.

INVALID COMMAND

INVALID PARAMETER

ILLEGAL DEPARTMENT CODE

LEDGER ACCOUNT NUMBER NOT IN FILE

LEDGER ACCOUNT NUMBER ALREADY IN FILE

INVALID PARAMETER CODE

LEDGER FILE FULL, ACCOUNT *nnnnnn* NOT ENTERED

ACCOUNT NUMBER MISSING

ACCOUNT NUMBER *nnnnnn* NOT IN FILE MASLE

MASTE FILE PARAMETERS
FOR FINANCIAL STATEMENTS

The following MASTE file parameters must be added to the MASTE file if the Financial Statements subsystem is to be used in an application. Use the SETP1 program instructions (in Section II) to add these parameters to the MASTE file. Note, however, that if any of these parameters already exist on MASTE (through some other subsystem) they do not have to be added onto the file again.

MASTE FILE PARAMETERS

Number	Meaning	Sample Entry
2	LAST CHECK REGISTER PAGE PRINTED	2,72
4	NUMBER OF LINES PER PAGE FOR LISTING CHECK TRANSACTIONS Standard is 6Ø lines per page	4,56
5	CURRENT CHECKING BALANCE As of conversion date	5,125696.32
7	PAR VALUE OF COMMON STOCK	7,1.ØØ
8	NUMBER OF COMMON STOCK SHARES OUTSTANDING	8,12732Ø
9	NUMBER OF COMMON STOCK SHARES AUTHORIZED	9,25ØØØØ
23	LEDGER ACCOUNT NUMBER FOR INCOME, SALES Maximum is eight digits	23,43Ø
25	LEDGER ACCOUNT NUMBER FOR COST OF SALES, INVENTORY Maximum is eight digits	25,513
26	LEDGER ACCOUNT NUMBER FOR INVENTORY Maximum is eight digits	26,12Ø
27	LAST LEDGER ACCOUNT NUMBER USED FOR ASSETS Maximum is eight digits	27,152
28	LAST LEDGER ACCOUNT NUMBER USED FOR LIABILITIES Maximum is eight digits	28,39Ø
29	LAST LEDGER ACCOUNT NUMBER USED FOR INCOME Maximum is eight digits	29,43Ø

MASTE FILE PARAMETERS (cont.)

Number	Meaning	Sample Entry
3Ø	LAST LEDGER ACCOUNT NUMBER FOR DIRECT COST Maximum is eight digits	30,513
81	NUMBER OF LINES PER PAGE FOR GENERAL LEDGER LISTING The standard is 6Ø lines per page	81,62
83	LEDGER ACCOUNT NUMBER FOR START OF PROFIT AND LOSS All ledger accounts equal to or greater than this number are used in the profit and loss program (PANDD). Maximum of eight digits	83,4ØØ
84	LAST LEDGER ACCOUNT NUMBER FOR CURRENT ASSETS Maximum of eight digits	84,12Ø
85	LAST LEDGER ACCOUNT NUMBER FOR FIXED ASSETS Maximum of eight digits	85,152
86	LAST LEDGER ACCOUNT NUMBER FOR CURRENT LIABILITIES Maximum of eight digits	86,224
87	LAST LEDGER ACCOUNT NUMBER FOR FIXED LIABILITIES Maximum of eight digits	87,399
88	LAST LEDGER ACCOUNT NUMBER OF EXPENSES Maximum of eight digits	88,99Ø
89	LAST LEDGER ACCOUNT NUMBER FOR STOCK-HOLDERS' EQUITY (RETAINED EARNINGS) Maximum of eight digits	89,39Ø
121	COMPANY NAME, BOUNDED BY QUOTES Maximum of 24 characters	121,"BEAVER TRUST"
122	COMPANY MAILING ADDRESS, BOUNDED BY QUOTES Maximum of 18 characters	122,"2Ø FRONT STREET"

MASTE FILE PARAMETERS (cont.)

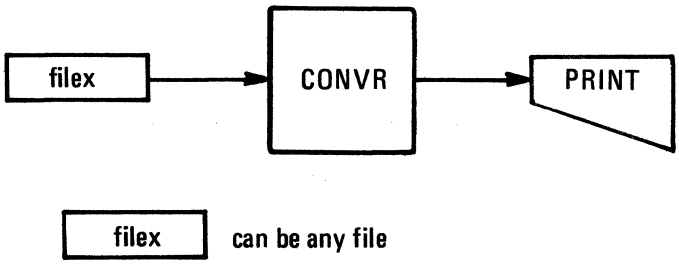
Number	Meaning	Sample Entry
123	COMPANY CITY ADDRESS, BOUNDED BY QUOTES Maximum of 12 characters	123,"PETULAMA"
124	COMPANY STATE ADDRESS, BOUNDED BY QUOTES Maximum of six characters	124,"CALIF."
125	COMPANY ADDRESS ZIP CODE, BOUNDED BY QUOTES Must be five characters	125,"926Ø4"

SECTION VII
USING UTILITY PROGRAMS

This section describes how to use system utility programs during the conversion process.

CONVR

The CONVR program prints selected records or record items from a master or interim file, by processing parameters entered through the system teleprinter.



PREREQUISITES

The files from which records are to be printed must be on a disc pack that is mounted and active.

The files must be created and built by their respective system programs.

> *NOTE: Interim files are only created during the conversion process. Since the system has yet to process any current period information, these interim files do not contain any information. Therefore, during the conversion process, CONVR can be used to print information from master files only.*

CONVR PROGRAM COMMANDS

The CONVR program uses only one command, "END." "END" is entered through the system teleprinter to terminate CONVR processing.

Command	Function	Example
"END"	ENDS THE CONVR PROGRAM	"END"

CONVR :PROG DIRECTIVE FORMATS

The :PROG directive used to start the program and operator responses to messages typed on the system teleprinter direct CONVR processing. The following chart shows CONVR functions and sample :PROG directive formats.

CONVR FUNCTION	SAMPLE :PROG DIRECTIVE
PRINT ALL RECORDS IN THE FILE; OR PRINT A SELECTED ITEM FROM ALL RECORDS	:PROG,CONVR,6
PRINT A RECORD AND ALL SUBSEQUENT RECORDS IN A FILE: OR PRINT A SELECTED ITEM FROM ONE RECORD AND ALL SUBSEQUENT RECORDS IN A FILE	:PROG,CONVR,6,214
PRINT ONE RECORD IN A FILE; OR PRINT A SELECTED ITEM FROM ONE RECORD	:PROG, CONVR,6,214,214
PRINT A SELECTED GROUP OF RECORDS IN A FILE; OR PRINT A SELECTED ITEM FROM A GROUP OF FILE RECORDS	:PROG, CONVR,6,214,248

CONVR OPERATING PROCEDURES

Step	Procedure	Examples
1	START THE PROGRAM. Using the :PROG directive format required, start CONVR. See "CONVR :PROG DIRECTIVE FORMATS" for the correct format to use.	:PROG,CONVR,6 :PROG,CONVR,6,214 :PROG,CONVR,6,214,214 :PROG,CONVR,6,214,248
2	ENTER NAME OF FILE TO BE PRINTED. After CONVR is started, it types the request: 'FILE NAME?' Type the required file name or type the "END" command to terminate the CONVR program.	'FILE NAME?' "MASCU"
3	DEFINE THE RECORD FIELD TO BE PRINTED. If a file name is entered in Step 2, the following request is typed: 'FIELD?' Type Ø if CONVR is to print either: a. All records (using the :PROG,CONVR,*n* directive). b. One complete record (using the :PROG,CONVR,*n,nnn,nnn* directive). c. A group of complete records (using the :PROG,CONVR *n,nnn,mmm* or :PROG,*n,nnn* Type a parameter number from the file's "ADD" Parameter Code table, to print that record item from choices listed above. After CONVR prints the desired records, it returns to Step 2.	'FIELD?' Ø 'FIELD?' 3

Step	Procedure	Examples
4	END THE CONVR PROGRAM.	'FILE NAME?'
	Type "END" to the CONVR request in Step 2.	"END"
	No special message is typed.	

NOTE: When the MASTE file, or any directory file is entered at Step 2, any entry can be typed at Step 3, as these files are always printed in their entirety.

If the Step 3 entry is not zero, the first field is printed, as well as the field requested for the record(s). This provides an identification key for the customer.

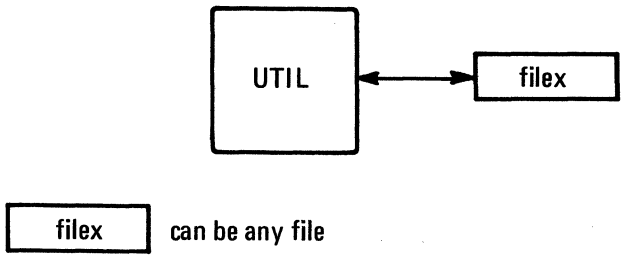
CONVR ERROR DIAGNOSTICS

Error diagnostics which could occur during CONVR processing are described in Section VIII.

UTIL

The UTIL program is a DOS-M utility program that can be used for several system functions. The DOS-M manual contains a complete discussion of UTIL functions.

Two UTIL functions are discussed below: making copies of system master and interim files, and checking (or changing) the size of system master and interim files. Copies of master and interim files are made periodically to protect the applications data base from accidental destruction. The sizes of master and interim files may have to be checked or changed if they contained too few or too many records when they were created.



PREREQUISITES

The UTIL program must have been installed as part of the DOS-M operating system when that system was generated, or stored as a user main program.

MAKING COPIES OF A FILE

To make a copy of a system master or interim file, follow these UTIL program instructions.

Step	Procedure	Examples
1	START THE UTIL PROGRAM Using the :PROG directive, start UTIL. Type :PROG,UTIL to get a list of the UTIL directives and their parameters typed or type :PROG,UTIL,1 to go immediately to Step 2.	:PROG,UTIL,1
2	ENTER THE UTIL COPY DIRECTIVE. When UTIL types the message: UTIL READY Type the UTIL copy directive, in this format: /COP, fname, packno fname = the name of the file to be copied. packno = the number of the disc pack to which the file is copied.	/COP,MASCU,123 /COP,TEMPL,123
3	UTIL COPIES THE NAMED FILE. When UTIL has copied the file, it returns to Step 2. Type any other UTIL directive (e.g., another copy directive) or type the /END directive to terminate the UTIL program.	UTIL READY /END

CHECKING SIZES OF FILES

To check (and change) the size of a system master or interim file, follow these UTIL program instructions.

Step	Procedure	Example
1	START THE UTIL PROGRAM. Using the :PROG directive, start UTIL. Type :PROG,UTIL to get a list of the UTIL directives and their parameters typed, or type :PROG,UTIL,1 to go immediately to Step 2.	:PROG,UTIL
2	ENTER THE UTIL BRIEF DIRECTIVE. When UTIL types the message: UTIL READY Type the UTIL brief directive, in this format: /BRI, fname, scode fname = the name of the file to be checked. scode = the security code for the file (if used). (See the DOS-M manual for security code data.)	/BRI,MASLE,Ø

Step	Procedure	Example
3	UTIL TYPES STATUS REQUEST. UTIL calculates the amount of the file spaced used, and types the following: AVAILABLE REC. = *nn* RECORDS USED = *nn* NEW RECORD COUNT ? To decrease the size of the file, type a new record count. To terminate the program, type /END.	/END

NOTE: A file must be opened before the size can be changed.

When the size of a master file is decreased, the size of its directory file must be decreased if the new record count for the master file is ≥42 records less than the original size of the file. Decrease the directory file one record for every 42 records of the master file decreased.

SECTION VIII
ERROR DIAGNOSTICS

Error diagnostics are routines that automatically check all system processing for three types of errors: disc processing errors, input format errors and system program errors. When an error is encountered, the diagnostic types an error message on the teleprinter to inform the operator. The operator then takes appropriate action to correct the error.

DISC PROCESSING ERRORS

Disc processing errors occur during the processing of disc files. The errors are diagnosed by error diagnostic routines in the extended file manager (EFMP) of the DOS-M operating system, and the appropriate messages are typed.

INPUT FORMAT ERRORS

Input format errors occur in input statements entered through any input file or device (such as the system teleprinter). The errors are diagnosed by an input formatting routine and the appropriate messages are typed.

SYSTEM PROGRAM ERRORS

These errors occur during processing of system programs. Each program uses system routines to diagnose errors in the structure and logic of the input data and program commands it processes. Appropriate diagnostic messages are typed. See each program for a list of program error diagnostics.

DISC PROCESSING DIAGNOSTIC MESSAGES

The following diagnostic messages could occur during disc file processing. The diagnostic messages are printed on the system teleprinter. See the *Moving-Head Disc Operating System* manual for a complete discussion of these error diagnostics.

EFMP ERROR (*nn*) IN DEFINING BUFFER AREAS

or

EFMP ERROR (*nn*) IN (action) FILE (name)

(*nn*) = an error code that defines the error condition. See the EFMP ERROR CODES table.

(action) = the process that resulted in the error. One of the following functions:

OPENING	CLOSING	CREATING
READING	WRITING	STATUS ON

(name) = the name of the disc file being accessed at the time of the error.

EFMP ERROR CODES

The following codes define the error condition that resulted in the disc processing error diagnostic message.

Whenever one of these errors occurs, the program currently processing terminates; except for errors occurring during OPENING and CLOSING functions, when the program is suspended to allow the proper disc pack to be mounted.

Error No.	Description
Ø	No errors.
1	Invalid EFMP function number.
2	Duplicate File Name.
3	File Name not in directory.
4	File too long for this pack.
5	Invalid record length.
6	Pack number not available (or Name not in directory if a search was made on all available pack directories).
7	Invalid Security Code.
8	A Temporary File must be "OPENED" with a CREATE function. An OPEN function can only change the Temporary Record Buffer number of the starting record number for a Temporary File.
9	Buffer area specified in Exec call is not valid.
1Ø	Invalid Record Number.
11	File not open.
12	DEFINE not previously executed.
13	Backspaced beyond "start-of-file."
14	No pack space available.
15	Invalid pack number.
16	During a pack search, a pack was found where the entire space was not allocated to PN*xxx*.
17	Work area space not sufficient.

EFMP ERROR CODES (cont.)

Error No.	Description
18	No "Open" table space available.
19	Invalid Temporary Record Buffer Number.
2Ø	Invalid number of Executive call parameters.
21	End-of-File.
22	COPY terminated.
23	Invalid argument(s).
24	Maximum number of files exceeded.
25	File already OPEN.
26	Record size larger than one-half of a TRB.

The error numbers are also returned in the A-Register.

INPUT FORMAT ERRORS

The following diagnostic messages could occur when input statements are being read through an input device. These messages are printed on the system teleprinter, followed by the input statement which contains the error.

ERROR IN NEXT LINE (input error message)
(line containing the input error)

The line containing the input statement begins with a four-digit sequence number, followed by up to 64 characters of the record. Sequence numbers are assigned to each input statement, beginning with ØØØ1 and incrementing after each input record is processed, unless input was from the system teleprinter, in which case no sequence numbers are used.

INPUT ERROR MESSAGES

Message

INVALID NUMERIC CHARACTER
EMPTY NUMERIC FIELD
INVALID DECIMAL POINT
TOO MANY DIGITS AFTER DECIMAL POINT
MISSING QUOTE IN ALPHA STRING
NUMERIC VALUE EXCEEDS 11 DIGITS
ALPHA FIELD LENGTH EXCEEDED
MISSING PARAMETER

If a disc input file is being processed the following message may appear:

UNDEFINED DISC INPUT FILE: JOB ENDED

APPENDIX A
CONSTRUCTING LEDGERS

Appendix A is a guide for constructing general ledgers and departmentalized ledgers. These ledgers must be defined, as they provide information necessary for the following conversion procedures:

1. Deciding how many departmentalized ledgers are to be created by the SETP2 program.
2. Entering ledger information into the SETP1 program to create the MASTE file.
3. Entering ledger information into the LEDHN program to build the MASLE file (and any departmentalized master ledger files required).

STANDARD ACCOUNTING PROCEDURES

Ledger account numbers are assigned in four categories: assets, liabilities, income and costs (expenses). The system uses the assets and liabilities categories to prepare general and departmentalized balance sheets; the income and expenses categories to prepare general and departmentalized profit and loss statements.

Ledger account numbers are assigned in an ascending sequence, beginning with accounts for assets and following with accounts for liabilities, income and expenses, in that order.

All dollar amounts for entries in the assets category are entered as positive numbers, except for reserves for bad debt and depreciation, which are entered as negative numbers. All dollar amounts for entries in the liabilities and income categories are entered as negative numbers. All dollar amounts for entries in the expenses category are entered as positive numbers. These sign conventions allow balancing entries to be made by the system program.

ASSIGNING ACCOUNT NUMBERS

Follow these rules when assigning all ledger account numbers:

1. Account numbers can contain a maximum of eight digits. However, a maximum of six digits is printed on any of the reports generated by the system programs.
2. Account numbers must be grouped in ascending sequence by category: assets, liabilities, income and expenses.
3. All account numbers for profit and loss statements must be greater than any numbers assigned to accounts for assets and liabilities.

CREATING SUBTOTALS FOR LEDGER CATEGORIES

The ledger chart of accounts can contain subtotal entries. These subtotals are printed on the balance sheets when the reports are issued.

The subtotal entry is entered at the point the subtotal is desired. To enter the subtotal, use the "ADD" parameters 1 and 2 of the LEDHN program. The subtotal account number must be entered as a negative number (parameter 1); the description (parameter 2) can be up to 24 characters in length.

APPENDIX B
INTERNAL REPRESENTATION OF DATA

This appendix describes how numeric and character values are represented in the data base and in core memory.

NUMERIC REPRESENTATION

All numeric values are represented as whole numbers, in either integer format or as double-precision floating-point numbers. This representation avoids errors in calculation due to the imprecision when representing a fractional value in floating-point notation.

Dollar values are represented as cents in the form: *n.nn**1ØØ = *nnn*. Other values can be in mills, in the form *n.**1ØØØ = *nØØØ*. The adjustment of a value is made when data is input and is determined by parameter classification. Values to be printed as part of a report are adjusted to appropriate representation by program control before output.

Integer format includes the range ±32767, which is sufficient for 4-digit fields. All data fields greater than four digits are defined as real values in double-precision floating-point format. This provides at least eleven significant digits of accuracy (± one billion dollars, or 999,999,999.99), which should be sufficient for accumulated totals within the scale of operations of Accounting And Financial Information System customers.

CHARACTER REPRESENTATION

All character values used in the data base are represented internally by ASCII codes.

APPENDIX C
MODIFYING REPORT FORMATS

This appendix describes the general format of reports. Since the reports are general-purpose, they may not satisfy all the features that a customer may desire. Therefore, the programs that generate the reports are structured to provide as much flexibility as possible for making minor modifications to the reports.

FORTRAN WRITE AND FORMAT STATEMENTS

Associated with most programs that produce a report is a subroutine that contains all the FORTRAN WRITE and FORMAT statements used to generate the report. The main program calls the subroutine to print a line or a group of lines. Parameters designating the logical unit for output, the line identification and variables are included in the CALL statement. The line identification may be used as the control variable in a computed GO TO statement within the subroutine to branch to the appropriate section. The structure of the subroutine, the descriptive comment statements in the listing and supporting documentation should facilitate modification of report formats.

FORM WIDTHS FOR REPORTS

All forms are designed for an output device with an 8Ø-character line. Line printer widths of 12Ø and 132 characters can be used, but the full line would not be used unless the customer modifies the programs to extend the page width.

APPENDIX D
METHOD USED TO AGE RECEIVABLES

This appendix describes the method used by the system to age customer accounts which have non-current balances due. All customer balances owed are aged by 30 days on a balance forward basis each time that STATM and AUTST are executed.

NOTE: If STATM and AUTST are run more than once during an accounting period, any aged balances are recalculated each time the programs are run.

NEW CURRENT BALANCE DUE

The new current balance due is calculated by adding all new invoice amounts to the previous balance due and then subtracting all new payments from the previous balance due.

NEW AGED AMOUNT DUE

The new aged amount due is calculated by subtracting all new payments from the oldest aged balance. If the oldest aged amount is reduced to zero, the remainder is applied to the next oldest aged balance, etc. The balance is then aged 3Ø days.

AGING RECEIVABLES EXAMPLE

On June 3Ø, 1971, customer 1Ø17 was issued a statement totalling $112Ø7.75. On July 5, 1971, a payment of $12Ø7.75 is received from customer 1Ø17. After CUSAC is executed to credit the payment, a CUSHN "DISPLY" of the customer's MASCU record shows the following information.

1Ø17	TERRY HABIB		NELSON RICHARD CO	ACCOUNTS	
	1377 HAIGHT		S.F.	CALIF 95Ø14	Ø
DATE LAST STAT.		DATE LAST PAY.	CUR. AMT. DUE	LAST STAT.	LAST PAY.
6/3Ø/71		7/5/71	1ØØØØ.ØØ	112Ø7.75	12Ø7.75
AMT. DUE Ø-59	6Ø-89	9Ø-12Ø	TOT BUS TO DATE		CREDIT
1ØØØ.ØØ	5ØØØ.ØØ	2ØØØ.ØØ	11271.8Ø		A-

Note that the current amount due is $2ØØØ.ØØ more than the total accounts of the aged balances, indicating that the customer has been invoiced for $2ØØØ.ØØ worth of goods during the current period.

On July 15,1971, customer 1Ø17 is invoiced for $4ØØØ.ØØ worth of goods. On July 31, 1971, the customer is issued a statement for $14ØØØ.ØØ. At this point, a CUSHN "DISPLY" of the customer's MASCU record shows the following information.

1Ø17	TERRY HABIB		NELSON RICHARD CO	ACCOUNTS	
	1377 HAIGHT		S.F.	CALIF 95Ø14	Ø
DATE LAST STAT.		DATE LAST PAY.	CUR. AMT. DUE	LAST STAT.	LAST PAY.
7/31/71		7/15/71	14ØØØ.ØØ	14ØØØ.ØØ	12Ø7.75
AMT. DUE Ø-59	6Ø-89	9Ø-12Ø	TOT BUS TO DATE		CREDIT
2ØØØ.ØØ	1ØØØ.ØØ	7ØØØ.ØØ	15271.8Ø		A-

Note that the new aged balances were calculated as follows:

New		Old
9Ø-12Ø balance	=	9Ø-12Ø balance + 6Ø-89 balance
6Ø-89 balance	=	Ø-59 balance
Ø-59 balance	=	cur. amt. due - the sum of the aged balances
cur. amt. due	=	cur. amt. due + the sum of new invoices

On August 1Ø, 1971, a payment of $75ØØ.ØØ is received from customer 1Ø17. After CUSAC is executed to credit the payment, a CUSHN "DISPLY" of the customer's MASCU record shows the following information.

1Ø17	TERRY HABIB		NELSON RICHARD CO	ACCOUNTS	
	1377 HAIGHT		S.F.	CALIF 95Ø14	Ø
DATE LAST STAT.		DATE LAST PAY.	CUR. AMT. DUE	LAST STAT.	LAST PAY.
7/31/71		8/1Ø/71	65ØØ.ØØ	14ØØØ.ØØ	75ØØ.ØØ
AMT. DUE Ø-59	6Ø-89	9Ø-12Ø	TOT BUS TO DATE		CREDIT
2ØØØ.ØØ	5ØØ.ØØ	.ØØ	15271.8Ø		A-

Note that the current amount due is calculated by subtracting the last payment from the amount of the last statement. The amount of the last payment has been applied first to the most overdue aged balance. The remainder ($5ØØ.ØØ) is then applied to the next most overdue aged balance.

APPENDIX E
SAMPLE REPORT FORMATS

This appendix shows sample reports printed by the CUSHN, INVIN, EMPHN, VENHN and LEDHN programs.

```
            CUSHN                    "DISPLY","1Ø17"

1Ø17        TERRY   HABIB            NELSON RICHARD CO      ACCOUNTS
            1377 HAIGHT              S.F.          CALIF    95Ø14        Ø
       DATE LAST STAT.   DATE LAST PAY.  CUR. AMT. DUE  LAST STAT.   LAST PAY.
           7/31/71          8/1Ø/71        65ØØ.ØØ       14ØØØ.ØØ     75ØØ.ØØ
       AMT. DUE Ø-59      6Ø-89        9Ø-12Ø    TOT BUS TO DATE     CREDIT
           2ØØØ.ØØ          5ØØ.ØØ         .ØØ       15271.8Ø          A-


            INVIN                    "DISPLY","Ø7ØØ16"

MODEL       DESCRIPTION      QTY ON HAND    REORDER LEVEL      DATE      REF. NO.
Ø7ØØ16   GATES 4-4RMJ  STEM        6              3          Ø/ Ø/ Ø        Ø
  COST       PRICE      1ST PRICE BREAK    QUANTITY    2ND PRICE BREAK    QUANTITY
   .32        1.35            .99            1Ø              .69            2Ø


            INVIN                    "VALUE"

            INVENTORY COSTS     $      9476.51
            RETAIL VALUE        $     33935.97
            PROFIT POTENTIAL    $     24459.46
```

INVIN "ALL"

MODEL	DESCRIPTION	QTY	ROL	DATE	COST	PRICE	REF
Ø1ØØØ1	FILLER BREATHER	15	1Ø	4/13/71	.75	3.9Ø	Ø
Ø1ØØØ2	SUCTION FLANGE 1/2	2Ø	1Ø	Ø/ Ø/ Ø	.75	2.5Ø	Ø
Ø1ØØØ3	SUCTION FLANGE 3/4	2Ø	1Ø	Ø/ Ø/ Ø	.75	2.5Ø	Ø
:							
Ø7ØØ31	4RLF SET FERRULES	228	12Ø	6/ 1/71	.18	.75	Ø
Ø7ØØ32	6RLF SET FERRULES	432	216	Ø/ Ø/ Ø	.23	.9Ø	Ø
Ø7ØØ33	8RLF SET FERRULES	834	417	Ø/ Ø/ Ø	.33	1.29	Ø

INVENTORY COSTS	$	9476.51
RETAIL VALUE	$	33935.97
PROFIT POTENTIAL	$	24459.46

INVIN "ORDER"

** RE-ORDER DATA

MODEL	DESCRIPTION	QTY	ROL	QFBO	QSRL	RODR	COST	TOT COST	REF
Ø1ØØØ5	RETURN FLANGE 1/2	8	1Ø	Ø	2	2	.5Ø	1.ØØ	Ø
Ø1ØØ16	HYD OIL 15Ø SSU 5G	3	4	Ø	1	1	2.5Ø	2.5Ø	Ø
Ø3ØØØ1	4 WAY VLV LV C/SC	-1	1	1	1	2	25.ØØ	5Ø.ØØ	Ø
Ø3ØØØ7	DV123 3DET-C 4-WAY	Ø	1	Ø	1	1	12.ØØ	12.ØØ	Ø
Ø4ØØØ2	FULFLO 1/2 REL VLV	2	3	Ø	1	1	6.25	6.25	Ø
Ø7ØØ22	4C5-4RMP COUPLING	1Ø	11	Ø	1	1	.14	.14	Ø
TOTAL REORDER COST	$	71.89							

INVIN "PRICES"

MODEL	DESCRIPTION	COST	PRICE	1ST PR.BRK.	QTY	2ND PR.BRK.	QTY
Ø1ØØØ1	FILLER BREATHER	.75	3.9Ø	2.3Ø	1Ø	1.29	2Ø
Ø1ØØØ2	SUCTION FLANGE 1/2	.75	2.5Ø	2.ØØ	1Ø	1.3Ø	2Ø
Ø1ØØØ3	SUCTION FLANGE 3/4	.75	2.5Ø	2.ØØ	1Ø	1.3Ø	2Ø
Ø1ØØØ4	SUCTION FLANGE 1	.75	2.5Ø	2.ØØ	1Ø	1.3Ø	2Ø
:							
Ø7ØØ3Ø	8C5-8RFJX COUPLING	.3Ø	1.39	1.Ø1	1Ø	.6Ø	2Ø
Ø7ØØ31	4RLF SET FERRULES	.18	.75	.55	1Ø	.38	2Ø
Ø7ØØ32	6RLF SET FERRULES	.23	.9Ø	.66	1Ø	.46	2Ø
Ø7ØØ33	8RLF SET FERRULES	.33	1.29	.94	1Ø	.66	2Ø

INVIN "PRICES","Ø7ØØ16"

MODEL	DESCRIPTION	COST	PRICE	1ST PR.BRK. QTY	2ND PR.BRK. QTY
Ø7ØØ16	GATES 4-4RMJ STEM	.32	1.35	.99 1Ø	.69 2Ø

EMPHN "DISPLY",2Ø4

EMP.#	KEY	NAME	EXMP	SS NO.	LAST DATE PAID
2Ø4	H*	BOB DELL	19	374-42-6714	Ø/ Ø/ Ø

PAY RATE	O/T RATE	P.RATE#1	P.RATE#2	DEPT CODE	YTD NON-TAX
2.82Ø	5.64Ø	6.27Ø	7.63Ø		.ØØ

MISC DED	A	B	C	D	E	F
	5.ØØ	7.5Ø	1Ø.ØØ	12.5Ø	15.ØØ	25.ØØ

YTD MISC DED	A	B	C	D	E	F
	.ØØ	.ØØ	.ØØ	.ØØ	.ØØ	.ØØ

YTD FICA	GROSS	F.W/T	S.W/T	L.W/T	UNEMP	FTELQ	GTELQ
.ØØ	.ØØ	.ØØ	.ØØ	.ØØ	.ØØ	.ØØ	.ØØ

VENHN "DISPLY","1Ø4"

VENDOR 1Ø4 DEPT MAINTENANCE 321.65 DUE 643.3Ø TO DATE
GROUNDSKEEPERS INC/ 11566 WOLFE ROAD/ CUPERTINO/ CALIF 95Ø14

LEDHN "DISPLY",19ØØ

ACCOUNT NO.	YTD TOTAL	DESCRIPTION
19ØØ	125Ø.ØØ	GOODWILL

CUT ALONG LINE

HEWLETT hp PACKARD

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ACCOUNTING AND FINANCIAL INFORMATION SYSTEM
CONVERSION GUIDE

5951-1349 April 1971

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